CLAIMS

What is claimed is:

1.   A method for communicating OOB messages comprising OOB proprietary

content to a legacy set-top device in a DOCSIS DSG environment, said method

comprising the steps of:

capturing an OOB message comprising DOCSIS content, said DOCSIS

content comprising one or more DOCSIS datagrams wherein each said DOCSIS

datagram comprises one or more PDUs and encapsulates a IP datagram;

transcoding the DOCSIS content in the OOB message into a QPSK

message; and

communicating the QPSK message to the legacy set-top device.

2.   The method of Claim 1, wherein said capturing an OOB message comprising

DOCSIS content comprises retrieving an OOB message from a cable plant.

3.   The method of Claim 1, wherein said transcoding the DOCSIS content in the

OOB message into a QPSK message step comprises:

decoding the DOCSIS datagram;

decoding the IP datagram; and

modulating OOB proprietary content into a QPSK message.

4.   The method of Claim 4, wherein said decoding the DOCSIS datagram step comprises extracting N number of PDUs from N number of DOCSIS datagram, wherein N represents a number correlating with the size of the OOB message.

5.   The method of Claim 4, further comprising reconstructing said IP datagram.

6.   The method of Claim 3, wherein decoding the IP datagram comprises:

        breaking down the IP datagram into a UDP datagram;

        extracting OOB proprietary content from the UDP datagram.

7.   A method for communicating messages from a legacy set-top device to a DOCSIS

DSG environment, said method comprising the steps of:

capturing an QPSK message comprising QPSK content and a MAC

header from the legacy set-top device;

transcoding the QPSK content in the QPSK message into an OOB

message comprising one or more DOCSIS datagrams; and

communicating the OOB message to the DOCSIS DSG environment.

8.   The method of Claim 1, wherein transcoding the QPSK content in the QPSK

message into an OOB message comprising DOCSIS content comprises extracting OOB

data from the proprietary OOB datagram.

9.   The method of Claim 8, wherein extracting OOB data from the proprietary OOB

datagram comprises utilizing information from the MAC header to create an IP header

and a UDP header.

10.   The method of Claim 8, wherein said transcoding the QPSK content in the QPSK

message into an OOB message comprising DOCSIS content further comprises

encapsulating the OOB data in to an UDP datagram and a IP datagram.

11.   The method of Claim 10, further comprising encapsulating each IP datagram into

a DOCSIS datagram.

12.   An apparatus for enabling communication between a legacy set-top device and a DOCSIS DSG environment, said apparatus comprising:

a cable plant feed to a cable plant;

a first filter separating traffic from a DSG tunnel from in-band traffic received from the cable plant via the cable plant feed,

a tuner/QAM demodulator, which receives the DSG tunnel from a CMTS,

a DOCSIS MAC;

a central processing unit;

a QPSK modulator, and

a memory, said memory comprising a program module.

13.   The apparatus of Claim 12, wherein said program module comprises instructions operative to:

capture an OOB message comprising DOCSIS content comprising one or more DOCSIS datagrams, wherein each said DOCSIS datagram comprises one or more PDUs and encapsulates a IP datagram;

transcoding the DOCSIS content in the OOB message into a QPSK message;

communicating the QPSK message to the legacy set-top device.

14.   The apparatus of Claim 12, wherein said program module comprises instructions operative to:

capturing an QPSK message comprising QPSK content and a MAC header from the legacy set-top device;

transcoding the QPSK content in the QPSK message into an OOB message comprising one or more DOCSIS datagrams;

communicating the OOB message to the DOCSIS DSG environment.

15.   The apparatus of Claim 14, wherein said OOB message comprises a return path demodulator for demodulating communications from the legacy set-top device to the DSG tunnel 128.

16.   The apparatus of Claim 14, further comprising a network controller.

17.   A computer-readable carrier including computer program instructions that instruct a computer to perform the steps of:

capture an OOB message comprising DOCSIS content comprising one or more DOCSIS datagrams, wherein each said DOCSIS datagram comprises one or more PDUs and encapsulates a IP datagram;

transcode the DOCSIS content in the OOB message into a QPSK message; and

communicate the QPSK message to the legacy set-top device.

18.   The computer readable carrier of Claim 17, wherein said capturing an OOB message comprising DOCSIS content comprises retrieving an OOB message from a cable plant.

19.   The computer readable carrier of Claim 17, wherein said transcoding the DOCSIS content in the OOB message into a QPSK message step comprises:

decoding the DOCSIS datagram;

decoding the IP datagram; and

modulating OOB proprietary content into a QPSK message.

20.   The computer readable carrier of Claim 19, wherein said decoding the DOCSIS datagram step comprises extracting N number of PDUs from N number of DOCSIS datagram, wherein N represents a number correlating with the size of the OOB message.

21.   The computer readable carrier of Claim 20, further comprising reconstructing said IP datagram.

22.   The computer readable carrier of Claim 19, wherein decoding the IP datagram comprises:

breaking down the IP datagram into a UDP datagram;

extracting OOB proprietary content from the UDP datagram.

23.   A computer-readable carrier including computer program instructions that instruct a computer to perform the steps of:

capturing an QPSK message comprising QPSK content and a MAC header from the legacy set-top device;

transcoding the QPSK content in the QPSK message into an OOB message comprising one or more DOCSIS datagrams; and

communicating the OOB message to the DOCSIS DSG environment.

24.   The computer readable carrier of Claim 23, wherein transcoding the QPSK content in the QPSK message into an OOB message comprising DOCSIS content comprises extracting OOB data from the proprietary OOB datagram.

25.   The computer readable carrier of Claim 24, wherein extracting OOB data from the proprietary OOB datagram comprises utilizing information from the MAC header to create an IP header and a UDP header.

26.   The computer readable carrier of Claim 24, wherein said transcoding the QPSK content in the QPSK message into an OOB message comprising DOCSIS content further comprises encapsulating the OOB data in to an UDP datagram and a IP datagram.

27.   The computer readable carrier of Claim 26, further comprising encapsulating each IP datagram into a DOCSIS datagram.

28.   An apparatus for receiving communications from a DOCSIS DSG environment comprising a DSG to OOB transcoder, said apparatus comprising:

an in-band modulator;

an out-of-band modulator;

a conditional access system;

a central processing unit; and

a QPSK modulator;

wherein said apparatus receives OOB messages from a DSG tunnel via the DSG to OOB transcoder, and communicates QPSK messages to the DSG tunnel via the DSG to OOB transcoder.

29.   The apparatus of Claim 28, wherein said OOB messages received from the DSG tunnel comprise OOB messages comprising DOCSIS content.

30.   The apparatus of Claim 29, wherein said DOCSIS content comprises one ore more DOCSIS datagrams.

31.   The apparatus of Claim 30, wherein each said DOCSIS datagram comprises one or more PDUs and encapsulates a IP datagram.